AMENDMENTS TO THE SPECIFICATION WITH MARKINGS TO SHOW CHANGES MADE

Amend the following paragraph:

[0029] --In another advantageous configuration of the blood pump according to the present invention, as a safety feature, the system will be maintained in such a manner that during a possible system failure, other than the immediate non-available cardiac support, there will be no further negative impact on the system which might impair the circulation or the pulmonary function. This safety feature is realized by providing that the area between the motor and the outer casing of the pump housing has a free flow cross section of at least 50%, preferably 80% of the free flow cross section <u>of an area</u> at one end of the intermediary piece. Upon a pump failure, blood can flow virtually unobstructed through the pump using it as a conduit, to thereby maintain the blood circulatory function.--.

AMENDMENTS TO THE CLAIMS WITH MARKINGS TO SHOW CHANGES MADE, AND LISTING OF ALL CLAIMS WITH PROPER IDENTIFIERS

1.-3. (Cancelled)

4. (Withdrawn-Currently amended) The blood pump of claim ~~23~~ 21, wherein the pump housing has a length ~~of the pump housing~~ and a diameter, wherein the length is twice as short as the ~~is less than twice that of its~~ diameter.

5. (Withdrawn) The blood pump of claim 4, wherein the length is less than 1.5 times the diameter of the housing.

6. (Withdrawn-Currently amended) The blood pump of claim ~~23~~ 21, wherein a ~~length of each of~~ the first and second vascular ~~connection devices~~ connections have each a length which is shorter than a diameter of the pump housing.

7. (Canceled)

8. (Currently amended) The blood pump of claim 21, further comprising a motor disposed in the housing for driving the impeller, and webs connected to an outer area of the pump housing for firmly holding the motor in place, wherein the webs are configured as vanes.

9. (Canceled)

10. (Currently amended) The blood pump of claim ~~21~~ 8, wherein the webs are configured for housing metal cables or metal pins for transmission of electric current.

11. (Currently amended) The blood pump of claim [[25]] 8, wherein the pump housing and the motor define ~~an area bordered by the motor and the casing, is~~ an area having a free flow ~~area with a~~ cross section which is ~~80~~ 50% of a flow cross section ~~of a free flow area~~ at ~~one~~ an area of each one of the housing ends ~~end of the pump housing~~.

12. (Currently amended) The blood pump of claim 11, wherein the free flow cross section ~~of the free flow area~~ is ~~50~~ 80 % of the flow cross section ~~of the free flow area~~ at the ~~one end of the pump~~ the area of each one of the housing ends.

13. (Currently amended) The blood pump of claim ~~25~~ 21, further comprising a second pump housing with impeller and a motor.

14. (Previously presented) The blood pump of claim 13, further comprising an adaptable connection device between the two pump housings.

15. (Currently amended) The blood pump of claim 14, wherein the ~~impellers are configured for being driven~~ impeller in one pump housing runs in opposite direction to ~~each other~~ an impeller in the other pump housing for impelling blood.

16. (Canceled)

17. (Currently amended) The blood pump of claim ~~23~~ 21, wherein the housing is provided with an attachment device for attachment of the pump to tissue of a bony rib cage.

18. (Canceled)

19. (Withdrawn-Currently amended) A method for a tubeless vascular implant of a blood pump with an impeller according to claim [[23]] 21, comprising[[:]] the steps of providing the blood pump, preparing vascular tissue for the implant, inserting the pump into location and connecting the pump directly to vascular tissue with connecting devices selected from the group consisting of suture rings and vascular prostheses.

20. (Withdrawn) The method of claim 19, wherein the pump connection devices are sutured directly to the vascular tissue.

21. (Currently amended) A blood pump ~~having an impeller~~ for interposition in a blood vessel, comprising:

a pump housing ~~with the~~ accommodating an impeller ~~disposed therein~~ and having one housing end intended for direct attachment at one location of the blood vessel and another housing end for direct attachment at another location of the blood vessel,

a first vascular connection formed integral with the one housing end, and

a second vascular connection formed integral with the other housing end,

wherein the first and second vascular connections are constructed for direct attachment to the blood vessel through suturing

~~a motor disposed within the housing for driving the impeller~~,

~~webs connected to a casing of the housing and to the motor for firmly holding the motor within the housing, wherein the housing is provided with at least two vascular connection devices for a tubeless connection of the pump to a blood vessel outside a heart~~.

22. (Currently amended) The blood pump of claim 21, wherein the motor is ~~an encapsulated~~ a fully enclosed motor.

23. (Canceled)

24. (Currently amended) The blood pump of claim 21, wherein each of the ~~tubeless connection devices~~ first and second vascular connections is a member selected from the group consisting of suture ring ~~or a~~ and vascular prosthesis.

25. (Canceled)

REMARKS

This Amendment is submitted preliminary to the issuance of an Office Action in the present application and in response to the Official Action of May 24, 2006.

Claims 4-6, 8, 10-15, 17, 19-25 are pending in the application. Claims 4-6, 17, 19, 20 and 23 have been withdrawn from further consideration. Claims 4, 6, 8, 10-13,15, 17, 19, 21-22, 24 have been amended. Claims 23, 25 have been canceled. No claims have been added. No amendment to the specification has been made. No fee is due.

It is noted that the Examiner has withdrawn previously presented claims 4-6, 17, 19-20 from further consideration because of their dependency on claim 23 which has been newly submitted in applicant's last response of March 15, 2006. Applicant has now canceled claim 23 and amended claims 4-6, 17, 19-20 to make them dependent on claim 21. As a result, these claims should rejoin the instant application.

The Examiner noted also applicant's failure to show support for the subject matter of claims 23-25 as newly submitted in applicant's last response of March 15, 2006. Claims 23 and 25 have now been canceled. Support for the subject matter of claim 24 can be found in paragraph **[0018]**, lines 1-4 of the instant specification. Reference is also made to original claim 2, now canceled.

It is further noted that the Examiner objected to the specification in replacement paragraph **[0029]**. Applicant has amended paragraph **[0029]** by setting forth a ratio between two defined cross sectional areas. It is believed that the specification is now clear on this point.

It is further noted that claims 11, 12 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 11 and 12 have been amended to address the §112, 2nd paragraph rejection.

Claims 8, 10-12, 21, 22 and 25 stand rejected under 35 U.S.C. §102(b) as clearly anticipated by U.S. Pat. No. 6,116,862 to Rau et al.

Claim 24 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Rau et al.

Claims 13-15 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Rau et al. in view of U.S. Pat. No. 4,957,504 to Chardack.

Applicant has amended the sole independent claim 21 by setting forth the interposition of the blood pump in a (single) blood vessel and the structural relationship between the pump housing and the blood vessel through integral provision of vascular connections at the housing ends of the pump housing and their direct attachment to two locations of this blood vessel through suturing. Support therefore can be found, for example, in paragraphs **[0018]**, or paragraph **[0023]**, lines 1, 2, or **[0039]**, lines 5-7, of the instant specification and in Fig. 1.

The Rau reference discloses a blood pump having a pump housing (10), whereby one end of the pump housing is provided with an inlet member (11) with an inlet (12) (cf. col. 2, lines 33-35). Placed in an end wall to the side of the pump housing is an outlet piece (19) with an outlet (18) (cf. col. 2, lines 49, 50). The Examiner contended in the last Office Action that the inlet member and the outlet piece are "*capable*" of being directly attachable to a blood vessel. Applicant respectfully disagrees and submits that this interpretation by the Examiner is divorced from the disclosure in Rau et al. As described in col. 3, lines 45, 55 and shown in particular in Fig. 2a, the inlet (12) of the blood pump is connected **by a hose** to a port (40) in the left ventricle. This is not a direct attachment. Likewise, the outlet (18) is connected by a hose to a port(43) to the aorta. Although the provision of a hose is not expressly referred to, Fig. 2a makes this quite clear. Thus, also the outlet (18) is not directly attached. Thus, while the inlet and outlet of Rau et al. are capable of being attached to blood vessels, there is no disclosure of a direct attachment. In addition, Rau et al. also fails to disclose a direct connection by suturing, and the interposition of the blood pump in a **single** blood vessel.

For the reasons set forth above, it is applicant's contention that Rau et al. neither teaches nor suggests the features of the present invention, as recited in claim 21.

As for the rejection of the retained dependent claims, these claims depend on claim 21, share its presumably allowable features, and therefore it is respectfully submitted that these claims should also be allowed.

Applicant has also carefully scrutinized the further cited prior art and finds it without any relevance to the claims on file. It is thus felt that no specific discussion thereof is necessary.

In view of the above, each of the presently pending claims in this application is considered patentably differentiated over the prior art of record and believed to be in immediate conditions for allowance. Reconsideration and allowance of the present application are thus respectfully requested.

Should the Examiner consider necessary or desirable any formal changes anywhere in the specification, claims and/or drawing, then it is respectfully requested that such changes be made by Examiner's Amendment, if the Examiner feels this would facilitate passage of the case to issuance. If the Examiner feels that it might be helpful in advancing this case by calling the undersigned, applicant would greatly appreciate such a telephone interview.

Respectfully submitted,

By: _____
Henry M. Feiereisen
Agent for Applicant
Reg. No. 31,084

Date: August 24, 2006
350 Fifth Avenue
Suite 4714
New York, N.Y. 10118
(212) 244-5500
HMF:af